

Mobile Radio Installation Considerations

**Noji Ratzlaff
KNØJI**

07 March 2017

Credit

Attribute

**learned it all from Steve
Whitehead**

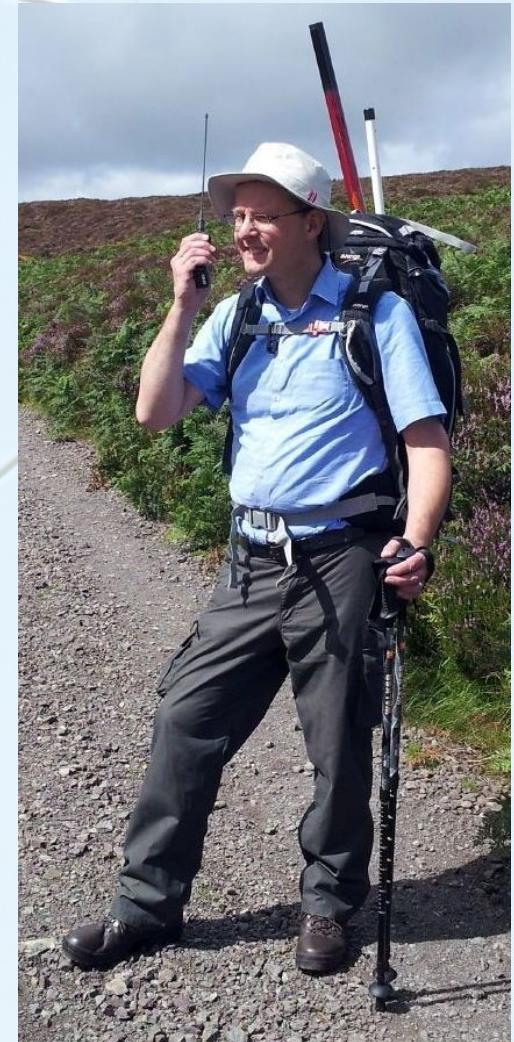
Blame

**so, any mistakes are probably his
fault**



The desire to be mobile

**Walking
Biking
Driving**



HT Mobile Portable



Driving



Copyright © 2017 Noji Ratzlaff

Mobile installation

Power source

**cigarette lighter
directly to the battery
other sources**

Antenna

**inside (whip or telescopic)
outside (lip-mount)
outside (mag-mount or glass-mount)
outside (hole-mount)**

Power source

Cigarette lighter

**convenient - most vehicles have
them**

can lack sufficient power

Directly to the battery

**out of the way / out of sight
installation can be difficult**

Other

portable, solar, generator, AC

Direct battery connection

Wiring

plan on 10 AWG minimum (30 to 35 A)

I use 6 AWG (55 to 65 A)

Routing

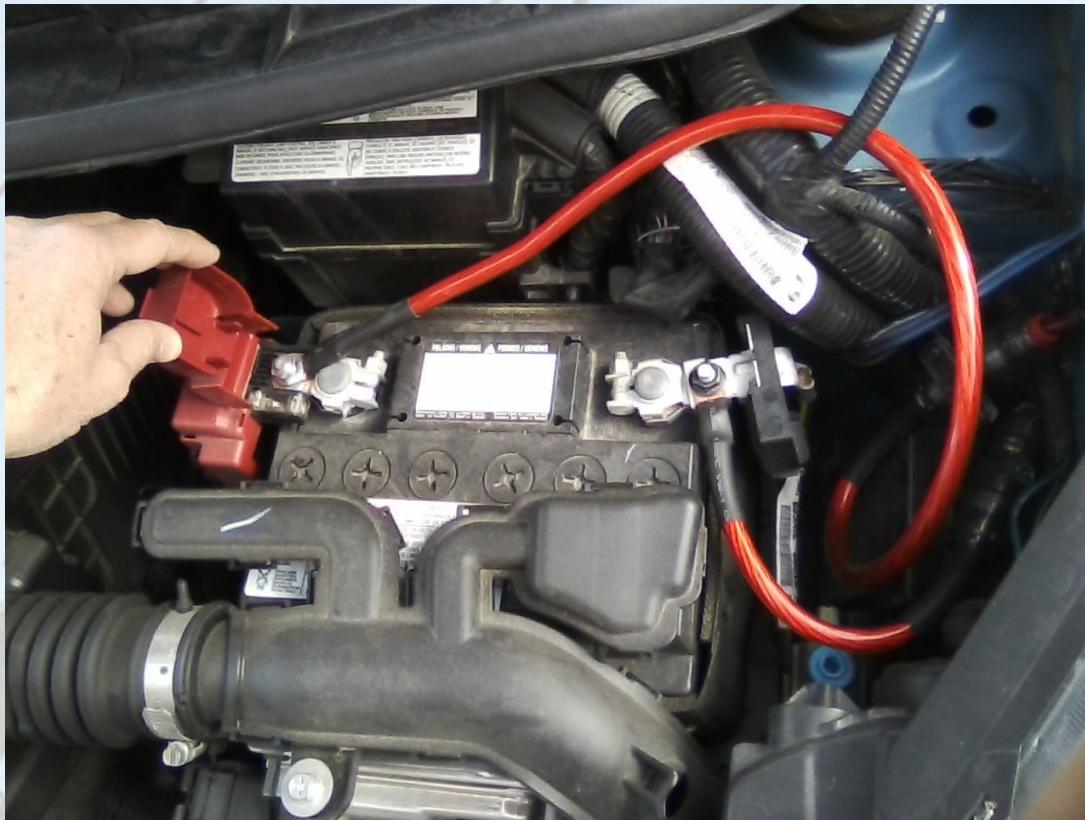
**through the firewall
under the dash and around to the
engine**

Fusing

**nearest the battery
fuse both sides for safest results
I use a pair of 30 A slow blow fuses**

Battery connection result

Should be safe and appear clean



Inside antenna

**Not ideal, but possible in a
pinch**

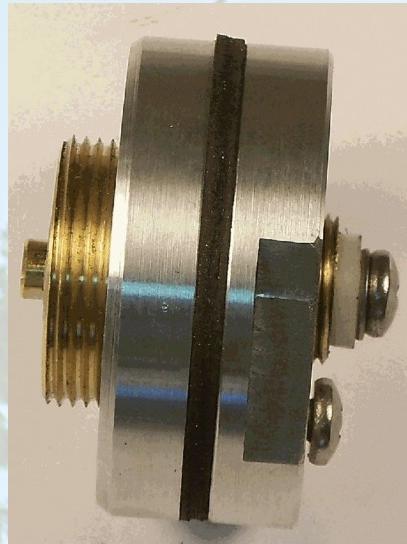
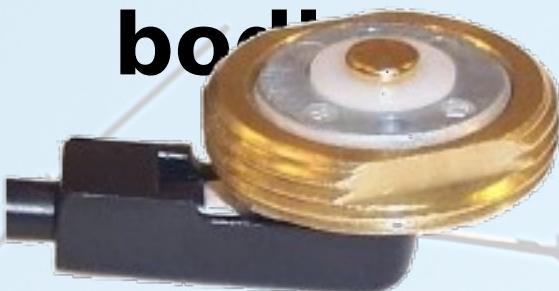
**rubber duck - please, no
whip - works if held in the
window**

**escopic - works well, but
awkward**



The NMO mount

Made for attaching to metal
bodies



Outside antenna

**Lip-mount
attach to trunk, hood, doorway
no direct metal body-contact**



Outside antenna

Mag-mount

**attach to roof, trunk, hood,
fender**

no direct metal body-contact



Outside antenna

Glass-mount

**attach to windshield, window
no direct metal body-contact**



Outside antenna

Hole-mount (drill into the body)

it'll make you cry

**loved ones will shake their
heads**

direct metal body-contact

best-performing option

**you'll be a real ham when
finished**

Let's try it

- Decide where, then measure
- Carefully open the roof
- Use a cardboard sheet to catch filings
- Punch to mark it, then drill $\frac{3}{4}$ " hole
- Bring mount from under



- Tighten the large brass ring using a wrench and a pair of needlenose

Outside antenna result

Tighten the antenna onto the mount

Might want to reinforce the thin roof
e of sheet metal



Other - separation kit

Install a removable control head

- need power to the main unit**
- need the antenna to the main unit**
- need control, mic, and speaker from the main unit to the control head**
- route the wires under the door runner from the front to the rear**

Separation result - main

**Main unit view in the vehicle
rear**



Separation result - head

Control head on the dash or console



Happy mobling!



Copyright © 2017 Noji Ratzlaff